

Weijia Wu

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Education

University of Michigan

August 2022 – May 2025

Bachelor of Science in Engineering in Computer Engineering

Ann Arbor, MI

GPA: 3.92

Relevant Coursework: Data Structures and Algorithms, Object Oriented Programming, Computer Organization, Electronic Circuits, Logic Design, Discrete Math, Robotic Mechanisms, Linear Algebra

Awards: Dean's List

Experience

University of Arkansas

June 2021 – January 2022

Software Development Intern

Fayetteville, AR

- Conducted research in the Department of Computer Science on an NSF-sponsored machine learning project built to detect cyber-security threats on Twitter
- Developed machine learning algorithms using Python Libraries to detect specific words in tweets and determine if they posed a threat
- Employed one-hot encoding to reduce memory usage and run time by over 50 percent

Projects

Last Stretch Food Delivery Robot | *Python, Arduino, AutoCAD*

November 2022

- Designed, programmed, and assembled an autonomous navigational robot using Python and Arduino to deliver food to "rooms" on a map
- Applied a python image recognition program on an Arduino to enable the robot to recognize and detect humans
- Programmed path tracking using color sensors facing a path on the floor, designed and 3D printed parts to implement a dropping mechanism when robot reaches destination

Personal Website V2 | *React, TailwindCSS, Javascript*

May 2023

- Created a portfolio website to provide information about myself and showcase personal projects
- Utilized React and TailwindCSS to update an older version of the website with more efficient and powerful tools, as well as improving the overall UI design

Three Function Calculator | *Intel Quartus Prime, ModelSim*

April 2023

- Implemented a functioning calculator on Quartus Prime with 11 bit two's complement addition, subtraction, and multiplication on the Altera DE2-115 Board
- Designed a state machine with Verilog code to handle the functions of the calculator, and display the correct results and overflow based on input
- Tested the design on ModelSim to check for timing violations, and fixed glitches by adding an extra safety state for delay

Euchre | *C++*

March 2023

- Created a functional game of Euchre with C++, played between a human and bots
- Constructed a Card, Pack, and Player class, and programmed a main driver to run the game
- Utilized classes, virtual functions, polymorphism, and other OOP concepts in C++

Extracurricular

Michigan Hackers

September 2022 – Present

- Worked with the open source team on Home Assistant to fix bugs and implement new features

UM Autonomous Robotic Vehicle

September 2022 – Present

- Collaborated with the computer vision team to develop edge-detection algorithms, wrote an image processing program to sort through and delete unnecessary frames in a video

Technical Skills

Languages: C++, Python, MATLAB, Verilog, JavaScript, HTML/CSS

Developer Tools: VS Code, React, TailwindCSS, Git, NPM, Node.js, Ubuntu